

CLAIMS

What is claimed is:

1. A signaling method for changing operating modes in a data communication system having a first device configured to communicate with a second device via a communication link, said method comprising the steps of:

transmitting a modem status signal from said first device to said second device, said modem status signal being configured as a differential phase-shift keying (DPSK) signal based on a predetermined bit pattern;

detecting said modem status signal at said second device; and

initiating a procedure associated with a change in the operating mode of said data communication system in response to said modem status signal.

2. A signaling method according to claim 1, wherein said modem status signal represents a modem hold request.

3. A signaling method according to claim 1, wherein said modem status signal represents a modem hold acknowledgment.

4. A signaling method according to claim 1, wherein said modem status signal represents a quick reconnect request.

5. A signaling method according to claim 1, wherein said modem status signal represents a disconnect signal.

6. A signaling method according to claim 1, wherein said modem status signal is configured as a DPSK signal based on a repetitive sequence of a predetermined bit pattern.

7. A signaling method according to claim 6, wherein said modem status signal is

configured as a DPSK signal based on eight repetitions of a four-bit pattern.

8. A signaling method according to claim 7, wherein said four-bit pattern is one of the following patterns: 0101, 0011, 0001, or 0111.

9. A signaling method for changing operating modes in a data communication system having a first device configured to communicate with a second device via a communication link, said method comprising the steps of:

receiving a modem status signal in response to a change in the operating mode of said data communication system;

detecting said modem status signal by analyzing a number of spectral components associated with said modem status signal; and

initiating a procedure associated with said change in the operating mode of said data communication system in response to said modem status signal.

10. A signaling method according to claim 9, wherein:

said modem status signal is configured as a differential phase-shift keying (DPSK) signal based on a predetermined bit pattern; and

said detecting step is performed by a tone detector.

11. A signaling method according to claim 9, wherein:

said modem status signal is configured as a differential phase-shift keying (DPSK) signal based on a predetermined bit pattern; and

said detecting step is performed by a DPSK receiver.

12. A signaling method according to claim 9, further comprising the step of receiving an A-tone prior to receiving said modem status signal.

13. A signaling method according to claim 13, wherein said A-tone is a 2400 Hz tone.

14. A signaling method for changing operating modes in a data communication system having a first device, resident at a client site, configured to communicate with a second device via a communication link, said method comprising the steps of:

receiving, at said first device, an indication related to the termination of an incoming call directed to said client site;

transmitting a modem status signal from said first device to said second device, said transmitting step being performed in response to said receiving step;

detecting said modem status signal with said second device; and

initiating, in response to said detecting step, a quick reconnect procedure to recall a stored operating parameter for said data communication system, said stored operating parameter being associated with a previous communication session between said first and second devices.

15. A data communication device comprising:

a receiver configured to receive a first indication related to an interruption in a current data mode;

a transmitter configured to transmit a first modem status signal to a remote data communication device in response to said indication, said first modem status signal being formatted as a differential phase-shift keying (DPSK) signal based on a first predetermined bit pattern; wherein

said receiver is further configured to receive a second modem status signal indicative of a modem hold mode, said second modem status signal being formatted as a DPSK signal based on a second predetermined bit pattern.

16. A data communication device according to claim 15, wherein:

said receiver is further configured to receive a second indication related to the termination of an incoming call;

said transmitter is further configured to transmit a third modem status signal to said remote data communication device in response to said second indication, said third modem status signal being formatted as a DPSK signal based on a third predetermined bit pattern; and

said third modem status signal is formatted to initiate a reconnect procedure to recall a stored operating parameter for said data communication system, said stored operating parameter being associated with a previous communication session conducted by said data communication device.